

***Amendments to the Claims***

This listing of claims will replace all prior versions, and listings, of claims in the application.

1.       *(Currently Amended)* A method, comprising:

adjusting a DC offset in a digital quadrature signal;

performing delta sigma modulation on the adjusted [[a]] digital quadrature signal;

converting the modulated signal to an analog signal;

converting the analog signal to an RF signal; and

transmitting the RF signal, ~~wherein the performing of the delta sigma modulation comprises performing 2<sup>nd</sup> order delta sigma modulation to output 4 bits from a 10 bit output.~~

2-3.      *(Canceled)*

4.       *(Original)* The method of claim 1, further comprising amplifying the RF signal before the transmitting.

5.       *(Canceled)*

6.       *(Original)* The method of claim 1, further comprising coding the modulated signal with a thermometer code.

7.       *(Currently Amended)* The method of claim 1, wherein the digital quadrature signal is formed using at least one of a GFSK modulation, a 4-PSK modulation, and a 8-PSK modulation modulations.

8. (*Currently Amended*) The method of claim 1, further comprising performing interpolation filtering on the adjusted digital quadrature signal before the delta sigma modulation.

9. (*Currently Amended*) The method of claim 8, wherein performing the interpolation filtering comprises reducing reduces the adjusted digital quadrature signal from 12 bits to 10 bits.

10. (*Currently Amended*) A system, comprising:

means for adjusting a DC offset in a digital quadrature signal;

means for performing delta sigma modulation on the adjusted [[a]] digital quadrature signal;

means for converting the modulated signal to an analog signal;

means for converting the analog signal to an RF signal; and

~~means for transmitting the RF signal, wherein the means for performing delta sigma modulation comprises means for performing 2<sup>nd</sup> order delta sigma modulation to output 4 bits from a 10 bit input.~~

11. (*Currently Amended*) An RF transmitter, comprising:

a DC offset device configured to adjust a DC offset in a digital quadrature signal;

a delta sigma modulator configured to perform a capable of performing delta sigma modulation on the adjusted [[a]] digital quadrature signal;

~~a digital-to-analog converter (DAC) configured to convert DAC, communicatively coupled to the delta sigma modulator, capable of converting the modulated signal to an analog signal;~~

~~a mixer configured to convert ,communicatively coupled to the DAC, capable of converting the analog signal to an RF signal; and~~

an antenna configured to transmit the RF signal, communicatively coupled to the mixer, capable of transmitting the RF signal, wherein the delta sigma modulator comprises a 2<sup>nd</sup> order delta sigma modulator configured to output 4 bits from a 10 bit input.

12-13. (*Canceled*)

14. (*Currently Amended*) The transmitter of claim 11, further comprising a power amplifier configured to amplify, communicatively coupled to the antenna and the mixer, capable of amplifying the RF signal before the antenna transmits the RF signal.

15. (*Canceled*)

16. (*Currently Amended*) The transmitter of claim 11, wherein the further comprising delta sigma modulator is configured to code further capable of coding the modulated signal with a thermometer code.

17. (*Currently Amended*) The transmitter of claim 11, wherein the digital quadrature signal is formed using at least one of a GFSK modulation, a 4-PSK modulation, and a 8-PSK modulation modulations.

18. (*Currently Amended*) The transmitter of claim 11, further comprising an interpolation filter configured to perform, communicatively coupled to the delta sigma modulator, capable of performing interpolation filtering on the adjusted digital quadrature signal before the delta sigma modulation.

19. (*Currently Amended*) The transmitter of claim 18, wherein the interpolation filter is configured to reduce filtering reduces the adjusted digital quadrature signal from 12 bits to 10 bits.

20. (*New*) The method of claim 1, further comprising:

generating the digital quadrature signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

21. (*New*) The method of claim 20, wherein converting the modulated signal comprises receiving a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

22. (*New*) The system of claim 10, further comprising:

means for generating the digital signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

23. (*New*) The system of claim 22, wherein means for converting the modulated signal comprises means for receiving a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

24. (*New*) The RF transmitter of claim 11, further comprising:

a digital quadrature signal modulator configured to generate the digital quadrature signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

25. (*New*) The RF transmitter of claim 24, wherein the DAC is configured to receive a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

26. (New) The RF transmitter of claim 11, further comprising:  
a binary to thermometer decoder configured to convert the modulated signal to a  
thermometer code.